

Application No. 10/627,219
Amendment and Response dated January 13, 2006
Reply to Office Action of October 14, 2005 [sic]

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of manufacturing a thermoplastic composite wood material comprising the steps of:

mixing together a first quantity of a first wood component of wood chips having long axes and a first size range, a second quantity of a second wood component of wood particles having a second size, the second size range being distinct from the first size range and having substantially smaller values than the first size range, and a third quantity of a first thermoplastic polymer component of molten thermoplastic polymer until substantially all of the wood chips and the wood particles are encapsulated by the thermoplastic polymer, thereby forming a mixture;

- 5 orienting the long axes of the wood chips of the first wood component of the mixture such that they are substantially parallel to a predetermined plane;
- 10 depositing the mixture noncontinuously as a loose material constituting a mixture of the wood chips encapsulated in the thermoplastic polymer and the wood particles encapsulated in the thermoplastic polymer onto a press inlet feed unit while maintaining the orientation of the long axes of the wood chips; and
- 15 pressing the loose material in a direction substantially parallel to the predetermined plane such that it is compacted and such that the long axes of the wood chips are aligned substantially parallel to one another.

Application No. 10/627,219
Amendment and Response dated January 13, 2006
Reply to Office Action of October 14, 2005 [sic]

2. (Original) A method in accordance with claim 1, further comprising the steps of:
forming the material resulting from the pressing step into an inner structural member;
mixing together a fourth quantity of a third wood component of wood particles having a third
size range and a fifth quantity of a second thermoplastic component of molten
thermoplastic until substantially all of the wood particles of the third wood component
are encapsulated by the thermoplastic polymer of the second thermoplastic component;
and

continuously joining the material created by mixing the third wood component and the second
thermoplastic component to the inner structural member to form an outer structural
member.

3. (Original) A method in accordance with claim 2, wherein the outer structural member
completely surrounds the inner structural member when the thermoplastic composite wood material is
viewed in cross section.

4. (Original) A method in accordance with claim 2, wherein the outer structural member
does not completely surround the inner structural member when the thermoplastic composite wood
material is viewed in cross section.

5. (Original) A method in accordance with claim 2, wherein the step of continuously joining
the outer structural member to the inner structural member is performed using a hot melt extruder and
profile molder.

6. (Original) A method in accordance with claim 2, wherein the step of continuously joining
the outer structural member to the inner structural member further comprises:
using calender forming rolls to form the material created by mixing the third wood component
and the second thermoplastic component into a thin sheet; and

Application No. 10/627,219
Amendment and Response dated January 13, 2006
Reply to Office Action of October 14, 2005 [sic]

5 pressing the thin sheet onto the inner structural member using rollers.

Claims 7-11 are cancelled.

12. (New) A method of manufacturing a thermoplastic composite wood material comprising the steps of:

mixing together a first quantity of a first wood component of wood chips having long axes and a first size range, a second quantity of a second wood component of wood particles having a second size, the second size range being distinct from the first size range and having substantially smaller values than the first size range, and a third quantity of a first thermoplastic polymer component of molten thermoplastic polymer until substantially all of the wood chips and the wood particles are encapsulated by the thermoplastic polymer, thereby forming a mixture;

10 orienting the long axes of the wood chips of the first wood component of the mixture such that
they are substantially parallel to a predetermined plane;
depositing the mixture onto a press inlet feed unit while maintaining the orientation of the long
axes of the wood chips; and
pressing the mixture in a direction substantially parallel to the predetermined plane such that it
15 is compacted and such that the long axes of the wood chips are aligned substantially
parallel to one another.

13. (New) A method in accordance with claim 12, further comprising the steps of:
forming the material resulting from the pressing step into an inner structural member;
mixing together a fourth quantity of a third wood component of wood particles having a third
size range and a fifth quantity of a second thermoplastic component of molten
thermoplastic until substantially all of the wood particles of the third wood component
are encapsulated by the thermoplastic polymer of the second thermoplastic component;

Application No. 10/627,219
Amendment and Response dated January 13, 2006
Reply to Office Action of October 14, 2005 [sic]

and

continuously joining the material created by mixing the third wood component and the second thermoplastic component to the inner structural member to form an outer structural member.

10

14. (New) A method in accordance with claim 13, wherein the outer structural member completely surrounds the inner structural member when the thermoplastic composite wood material is viewed in cross section.

15. (New) A method in accordance with claim 13, wherein the outer structural member does not completely surround the inner structural member when the thermoplastic composite wood material is viewed in cross section.

16. (New) A method in accordance with claim 13, wherein the step of continuously joining the outer structural member to the inner structural member is performed using a hot melt extruder and profile molder.

17. (New) A method in accordance with claim 13, wherein the step of continuously joining the outer structural member to the inner structural member further comprises:

using calender forming rolls to form the material created by mixing the third wood component and the second thermoplastic component into a thin sheet; and
pressing the thin sheet onto the inner structural member using rollers.

5